

## ABSTRACT

Disclosed are various forms of an active, isolated  $\beta$ -secretase enzyme in purified and recombinant form. This enzyme is implicated in the production of amyloid plaque components which accumulate in the brains of individuals afflicted with Alzheimer's disease. Recombinant cells that produce this enzyme either alone or in combination with some of its natural substrates ( $\beta$ -APPwt and  $\beta$ -APPsw) are also disclosed, as are antibodies directed to such proteins. These compositions are useful for use in methods of selecting compounds that modulate  $\beta$ -secretase. Inhibitors of  $\beta$ -secretase are implicated as therapeutics in the treatment of neurodegenerative diseases, such as Alzheimer's disease.